A novel treatment for Parkinson's Disease ©2010, Brian A. Smith, D.C.

Flagging Proposal

Proposal: A pilot study of ten week duration with 10 to 12 participants in early stages of Parkinson's disease demonstrating mild to moderate tremors and early-stage forward flexion. Participants must have the ability to grasp and hold the flag and should have a love of music and dance. The goal of the pilot study is to evaluate the effects of simple, repetitive upper extremity movements on the frequency and severity of tremors and the reversal of any forward flexion, if present.

Background: There exists a body of evidence demonstrating that repetitive movements, whether fine or gross, affect the neural circuits differently than non-repetitive movements.

As an example, certain adherents of the branch of Islam known as Sufism are known as dervishes. These dervishes achieve an altered state of consciousness through gross repetitive movements such that they are commonly known as "whirling dervishes."

A problem arises when developing any type of repetitive movement program with patient compliance. Most programs of this nature are not rewarding to the participant at an immediate level and interest in the program wanes. Patients that do experience improvements are no more likely to continue with the programs than are patients that do not experience improvements. The most frequent reason for discontinuance is loss of interest due to perceived input of significant energy and/or time without realizing an immediate reward.

The problem is to find an activity that is rewarding, both instantly as well as long-term. This activity should ideally involve patient choice to some degree; flexibility as to time of day and location where the activity if performed; and not be perceived as a therapy, treatment or regimen, but rather as something fun and joyful to do.

Dr. Smith: is a chiropractic doctor in private practice for 20 years. Despite some ill-informed opinions, chiropractic doctors are experts on the anatomy and physiology of the nervous system which is the basis of the practice of chiropractic. Dr. Smith became a certified internist in 1996 upon completion of a three-year post-graduate course of study in diagnosis and internal disorders.

As a leisure activity, Dr. Smith began "flagging" ten years ago. Flagging entails using two pieces of weighted fabric called flags that are manipulated in concert with music. The gross movements as seen from afar appear, at first, to be non-repetitive. Upon close inspection however, it becomes evident that the basic move of all flagging is a "figure-8" type motion of each wrist. This repetitive movement is often coupled with non-repetitive and repetitive movement at the elbow and shoulder joints.

Dr. Smith would lead weekly classes of one-hour in duration for ten weeks. During the class the participants would be instructed in flagging techniques, questioned regarding consistency of performing activity and any subjective changes the participant is aware of. Attempts to quantify frequency and intensity of tremors, changes in body habitus, and any other measurable physical parameters would be obtained.

Participants would be required to “flag” ten minutes a day at a location of their choice and to music of their liking. This activity can be done alone or in a group setting.

Basis: Over the past three years Dr. Smith has had the opportunity to observe three patients with different health challenges, benefit from flagging. The benefits realized were not ever thought to be a goal when each person performed the activity.

Patient one: a 68-year-old female with moderately reduced range-of-motion of the left shoulder with pain varying from mild to moderate with certain motions. In a social setting she observed Dr. Smith flagging and expressed an interest in it. With minimal instruction, the patient, using one flag in her left hand, began flagging. After several minutes, Dr. Smith noted that the range-of-motion in the left shoulder had increased to a degree that the patient had during the three years previous. The patient flagged approximately ten minutes. Patient awareness and focus on an affected joint and its motion often cause the patient to adopt a guarding attitude that may initially serve as a protective mechanism, but in the long run, may cause enforced reduction of motion to prevent the occurrence of pain. This patient was unaware of the degree of motion she was performing with her left shoulder. Dr. Smith did not bring this to her attention as he did not want the patient’s self-perception to influence the results. For the three days following this single episode, Dr. Smith spent significant amounts of time with this patient in a social setting. At no time did the patient relate any pain or discomfort or limited motion of the left shoulder and in fact it was Dr. Smith’s observation that the degree of motion had remained at a higher level for at least two days without the patient repeating the activity.

Patient two: a 48-year-old male who had suffered a major stroke over ten years previously. After a period of regaining certain motions and improving them that lasted several years, the patient started experiencing a deterioration resulting in a flexion-contracture of his right upper extremity as well as a similar change in his right lower extremity which necessitated the use of a permanent leg brace. The patient had to have surgical intervention to “release” several of the upper extremity contractures to prevent his fingernails from piercing the skin of his palm.

This patient expressed an interest in flagging as a social outlet, not as a treatment regimen. Dr. Smith taught him the rudimentary movements and the patient took it upon himself to pursue flagging. After ten weeks, Dr. Smith again saw the patient and inquired about his progress with flagging. The patient admitted that initially he flagged for 15 to 30 minutes daily but by week four he had reduced that to twice or three times a week and that he had not flagged at all in the previous two weeks. When asked, the patient relayed that after approximately three days he noticed a measurable decrease in the disequilibrium he had been experiencing as well as greater freedom of motion of both the right upper and lower extremity. The improvements were obvious to the patient for the first “two or three weeks” after which he believes he “hit a plateau” and would not experience any further gains. He also related a regression of the improvements over the previous two weeks.

This patient would be an ideal candidate for a more structured environment in which to perform the activity as well as to have a third-party objectively evaluate for any changes. Just as in the case of a person losing weight on a diet program, the self-perception of the losses of weight in the later phases is often incorrect. The rapid rate of

weight loss during the beginning phase of a dietary program is not matched by the losses and the end and often negated by the patient. In a similar manner, this patient probably continued to experience improvements, but to a much lesser extent and he was either not able to discern the improvements or negated their possibility by equating a small improvement with no improvement.

Patient 3: a 42-year-old male who has had Parkinsonism for 7 years. In a similar manner, this patient wanted to learn how to flag for reasons not associated with improvements in health status. After receiving a basic instruction in flagging, the patient pursued it on a daily basis with sessions lasting about 30 minutes. After 30 days, the patient contacted Dr. Smith and informed him that he had experienced remarkable improvements as a result of flagging. The patient related that, for the first time in almost 5 years, he was able to stand erect with his arms over his head. He also related that, while flagging, his tremor would reduce by a factor of up to 90%. Further, he would experience reduced frequency and intensity of the tremor after stopping the flagging. The tremor would become more apparent throughout the day as the time increased since he had flagged. The patient subsequently reduced the frequency of his flagging due to changes experienced in other areas of his life. He reported deterioration towards what he considered as his “baseline” at the time he started to flag, though even with a 5-day lapse in flagging, he had not reached his baseline.

This patient urged Dr. Smith to develop this proposal as he readily saw the benefit of having a program such as this one where the activity is fun and engaging and not viewed as a treatment regimen.